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ACTIVITIES OF THE UNITED NATIONS SYSTEM OF ORGANIZATIONS  
IN THE FIELD OF INDUSTRIAL DEVELOPMENT

Second Consolidated Report of the Industrial Development  
Activities of the United Nations System of Organizations

Summary Data on Operational Activities of the  
Centre for Industrial Development

67-04836

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CONTENTS

	<u>Page</u>
<u>Introduction</u> . . . . .	3
I. <u>Expanded and Regular Programmes of Technical Assistance</u> . . . . .	8
A. Individual Industries . . . . .	11
B. Policies and Programming . . . . .	14
C. Industrial Institutions . . . . .	16
D. Small-Scale Industries . . . . .	17
E. Management and Training . . . . .	18
II. <u>Projects Undertaken by UNDP/Special Fund for which CID has     Substantive Responsibility</u> . . . . .	20
A. Research Institutes . . . . .	25
B. Small-Scale Industries and Industrial Estates . . . . .	29
C. Development of Specific Industries . . . . .	30
D. Industrial Development Centres . . . . .	32
E. Regional Projects . . . . .	35
F. Co-operation with Other Agencies . . . . .	38
III. <u>Special Industrial Services Programme</u> . . . . .	40

## INTRODUCTION

1. United Nations assistance in support of industrialization of developing countries has almost doubled since 1964.<sup>1/</sup> This expansion confirms the reversal of the downward trend which had resulted from a "diminishing share of projects related to manufacturing industries" in preceding years.<sup>2/</sup> But examined in relation to the growing requirements of the developing countries, the support provided so far can be considered only a modest beginning.
2. The differences in the operational pattern of the various United Nations programmes of assistance prevent a precise cumulative comparison of the corresponding data. Table 1 is intended, therefore, to convey a general picture of the situation. More specific statistical references are included in the text dealing separately with activities under the Regular and Expanded Programmes of Technical Assistance, and the Special Fund section of United Nations Development Programme.

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<sup>1/</sup> This report refers to industrial development projects executed with the substantive support of the Centre for Industrial Development (UNIDO). The statistical data for 1966 operations are based on preliminary estimates, and those for 1967 on the estimated cost of proposed programmes as approved by the General Assembly at its twenty-first session and the UNDP Governing Council at its ad hoc session in November 1966 and its January 1967 session.

<sup>2/</sup> Statement of the Executive Chairman of the Technical Assistance Board before the Technical Assistance Committee, 1 December 1965; (E/TAC/L.361, p. 7, see also E/C.5/134, Table I).

Table 1.

SOURCES OF FUNDS FOR INDUSTRIAL DEVELOPMENT SERVICED BY CID  
 (Thousands of US Dollars)

<u>Source of Funds:</u>	1963	1964	1965	1966	1967
				(Preliminary)	(Estimated cost as per approved programme)
	<u>Expenditures</u>				
Regular Programme	546	538	850	870	1,049
Expanded Programme					
(i) Projects within programme allocations	1,202	1,411	1,391	1,750	2,832
(ii) Contingency allocations	52	188	81	385	365 <sup>a/</sup>
Funds in Trust	<u>63</u>	<u>100</u>	<u>186</u>	<u>176</u>	<u>200<sup>a/</sup></u>
Total	1,863	2,237	2,508	3,181	4,446
	<u>Cost of Projects</u>				
UNDP/Special Fund Governing Council earmarkings	2,082	2,113	4,288	4,433	2,921 <sup>b/</sup>
Special Industrial Services Trust Fund Cost of approved programme	-	-	-	449	2,500 <sup>c/</sup>

<sup>a/</sup> Estimated on the basis of actual expenditures under Contingency and Funds in Trust in 1965-66 to provide a basis for comparison.

<sup>b/</sup> Represents only projects approved by the UNDP Governing Council in January 1967.

<sup>c/</sup> Anticipated total cost of projects expected to be approved during 1967. Expenditure may partly be incurred in 1968.

Source: United Nations Development Programme documents DP/RP/1, Add.1 and 2; UNDP/SF reports, Series A, and DP/TA/L.5 and 6, and Corr. 1.

3. The increase in the support provided for industrial development can also be measured by the number of experts assigned to the developing countries, as illustrated by Table 2.

Table 2.

INDUSTRIAL DEVELOPMENT EXPERTS ENGAGED IN UNITED NATIONS TECHNICAL ASSISTANCE PROGRAMMES SERVICED BY CID, 1963-1966  
 (by type of project)

	1963	1964	1965	1966 (Preliminary)
<u>Country Projects</u>				
Africa	21	22	33	50
Asia and the Far East	50	51	65	86
Latin America	25	41	58	45
Europe	3	19	4	31
Middle East	15	3	16	
Total -	114	136	176	212
<u>Regional Projects</u>				
Africa	1	8	20	147
Asia and the Far East	9	10	9	
Latin America	11	19	8	
Total -	21	37	37	
<u>Inter-regional Projects</u>				
Advisers	3	9	14	147
Symposia, conferences, etc.	30	55	61	
Total -	33	64	75	
Grand Total -	168	237	288	359

Source: Documents E/3870, E/4016, and DP/RP/1, Add.1; 1966 figures based on preliminary estimates.

4. Training forms another major component of United Nations programmes. In a large number of cases training is provided by the experts in the field, in the course of implementation of the projects, and by participation of nationals of the developing countries in conferences, seminars, workshops and other group activities. The fellowship awards issued to individual nationals of the various countries for training abroad under Regular and EPTA alone totalled nearly 300 in 1966 as compared with 178 in 1965.

5. The Special Industrial Services programme was initiated in 1966. This programme has augmented the resources and broadened the scope of the aid available for industrial development. It has also allowed a programming and procedural flexibility more consistent with the special requirements of industry. For the implementation of this programme, the Centre for Industrial Development was given the responsibility of Executing Agency.
6. Direct assistance to the developing countries was given a more definite priority in the planning of the various activities of the Centre for Industrial Development for 1966. The result has begun to show in a better selection and formulation of projects for assistance and in an improvement in the implementation of the projects at hand.
7. In 1966, relations between CID and the developing countries were strengthened in line with ECOSOC resolution 1081 D (XXXIX). Approximately forty countries<sup>3/</sup> were visited during the year by interregional advisers and senior staff members of the CID for brief surveys and exchange of views on specific techno-economic problems, or for assistance to governments concerned in the identification of requirements under various United Nations industrial development programmes. These missions resulted in several new projects and assisted in the implementation of a number of existing requests by formulating a clearer definition of objectives and providing fuller background information. In the course of these missions, the interregional advisers and staff members of CID, having come in direct contact with the experts in the field, gained a better understanding of their problems, and thus enabled CID to provide the experts with more effective support. Moreover, in 1966, a modest beginning was made in the implementation of ECOSOC resolution 1081 D (XXXIX) which called for the posting of experts in the offices of the Resident Representatives of the UNDP. Candidates are being processed for secondment to a number of selected offices in 1967.

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<sup>3/</sup> Countries visited by the interregional advisers and senior staff of CID:  
Africa - Algeria, Cameroon, Congo (Democratic Republic of), Ghana, Kenya, Liberia, Libya, Mali, Malta, Mauritania, Morocco, Nigeria, Senegal, Somalia, Tunisia, Uganda, UAR; Asia and the Far East - Ceylon, India, Iran, Mongolia, Philippines; Europe and the Middle East - Bulgaria, Cyprus, Greece, Israel, Jordan, Lebanon, Turkey; Latin America - Argentina, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru.



8. A new experiment is being attempted in the assessment of technical assistance requirements of the developing countries in the field of industry. The particular needs of a given country or enterprise are combined in a comprehensive project, taking into account total United Nations resources and the differences in their programming schedules and patterns of operation. The experiment is designed not only to render assistance on a sound and comprehensive plan but also to meet urgent governmental requests more expeditiously through flexible administrative procedures. This is made possible by the special consideration given to projects in the field of industry for allocation from contingency reserves, by making available the services of interregional advisers or senior staff members, by using the resources of Special Industrial Services when justified, or by having recourse to pre-project financing for projects in the Special Fund sector of the UNDP.

I. EXPANDED AND REGULAR PROGRAMMES OF TECHNICAL ASSISTANCE

9. The Expanded Programme of Technical Assistance for the biennium 1967-68 is the first one prepared after the adoption of ECOSOC resolution 1081 E (XXXIX) of 30 July 1965, which had expressed the view that, for the 1967-68 EPTA biennium, it would be appropriate to double approximately the share of support for projects related to manufacturing industries. That objective was not fully met, due mainly to the fact that the continuing commitments under projects in other fields absorbed a considerable part of the total resources. Nevertheless, the value of projects in the field of industry in the 1967-68 programme increased in relation to the preceding bienniums as indicated in Table 3.

Table 3

INDUSTRIAL PROJECTS SERVICED BY CID IN RELATION TO TOTAL  
 UNITED NATIONS ACTIVITIES UNDER EPTA

	1963	1964	1965	1966 (Prelim.)	1967 (Estimated cost as per approved programme)
	<u>Expenditures</u> (Thousands of US Dollars)				
Industrial Development (as per Item 1 (b) of Table 1)	1,254	1,599	1,472	2,135	3,197 <sup>a/</sup>
Total UNTA/EPTA	8,168	10,464	9,057	10,330	11,774
	<u>Percentage</u>				
Share of industry in total UNTA/EPTA programmes	15.3	15.3	16.3	20.7	27.1

Source: Same as for Table 1.

<sup>a/</sup> Includes \$365,000 estimated for contingency financing, based on 1965-66 actual expenditures.

10. During 1966, the second year of the biennium 1965-66, there was an increase of 34 per cent in obligations and expenditures for projects in the field of industry as compared with the corresponding year 1964 of the preceding biennium.

In relation to the first year of the biennium 1965-66, the 1966 increase in projects in the field of industry was about 45 per cent. Since the 1965-66 programme was prepared before the adoption of ECOSOC resolution 1081, the increase in the share of assistance for industrial development during that year resulted from the use of savings accruing from delays in the implementation of projects in other fields, from allocations from the contingency funds, or from additional resources provided under the Funds-in-Trust arrangement as shown in Table 1.

11. The increase in the share of projects in the field of industry has been more noticeable under the United Nations Regular Programme, which is not subject to biennial programming. ECOSOC resolution 1081 E (XXXIX) had already begun to influence this activity in 1966, and the value of industrial projects included in the approved programmes for 1967 represents an increase of 95 per cent in relation to the activities in 1964, as shown in Table 4 below. The table also shows that there has been a progressive increase in the support for industrial development since 1965 in relation to total United Nations activities within the Regular Programme.

Table 4

PROJECTS IN THE FIELD OF INDUSTRY SERVICED BY CID AND TOTAL UNITED NATIONS ACTIVITIES UNDER REGULAR PROGRAMME

	1963	1964	1965	1966 (Prelim.)	1967 (Estimated cost as per approved programme)	
	<u>Obligations and Expenditures</u> (Thousands of US dollars)					
<b>Industrial Development</b>						
(a) Country Programmes	337	278	485	}	576	
(b) Regional	81	83	143		870	383
(c) Inter-Regional	<u>128</u>	<u>177</u>	<u>223</u>			<u>90</u>
	546	538	850	870	1,049	
<b>Total United Nations Regular Programme</b>	6,347	6,400	6,400	6,400	6,400	
	<u>Percentage</u>					
<b>Share of industry in total United Nations Regular Programme</b>	8.6	8.4	13.3	13.6	16.4	

Source: Same as Table 1.

1. Table 5 presents a functional classification of experts provided for industrial development under the various United Nations programmes for country projects only. As indicated in 1966,<sup>4/</sup> when a similar attempt was made for the first time, the functional classification should be considered as tentative because the assignment of an expert may encompass more than one class of activity. Furthermore, for some projects, especially those supported by the UNDP/Special Fund, the project title has been used as a basis for classification while the functions of the individual experts assigned to such projects have often covered activities falling under other general categories:

Table 5  
 NUMBER OF EXPERTS ASSIGNED TO COUNTRY PROJECTS SERVICED BY CID  
 IN 1966 (BY TYPE OF FUNCTION)

	Total	Individual Industries	Industrial Policies and Industrial Planning and Programming	Industrial Research and Industrial Institutions	Small-scale Industries and Industrial Estates	Training Management
Africa	50	13	20	6	7	4
Asia and the Far East	86	49	17	8	8	4
Latin America	45	16	8	14	7	0
Middle East	15	4	9	1	0	1
Europe	16	10	5	0	1	0
Total	212	92	59	29	23	9
Percentage	100.0	43.5	27.8	13.7	10.8	4.2

Source: Preliminary data based on United Nations Technical Assistance Recruitment Services monthly list of appointments confirmed.

13. The work of experts assigned to projects supported by UNDP/Special Fund is outlined in Section II of this document and the assignment of experts under Special Industrial Services is described in a separate report on that programme

<sup>4/</sup> E/C.5/D/1/Add.1, Annex II, para. 7.

(document ID/B/7). References to the work of a number of experts can be found also in the main body of the report under various headings corresponding to these activities. The main body of the report covers also regional and inter-regional activities, seminars, conferences, training groups, etc. The references to individual projects made in the following paragraphs are only intended to provide a summary of the pattern of services that have been made available to the Governments.

A. Individual Industries

14. This class of activities absorbed the largest number of experts, or 43.5 per cent of the total. Included in this group are the experts assigned to work on the technical problems of specific industries as well as on the general technical problems of industrialization such as standardization, industrial design, etc.

15. In Afghanistan, assistance is being provided to introduce the metric system throughout the country. In continuation of the work done in Burma in 1956 by a United Nations expert in the elaboration of national engineering standards, an adviser on industrial design and metrology has been assigned to help the Government in designing and setting up industrial equipment and in organizing a training programme for testing, calibration and certification of scientific and precision instruments. In Ceylon, an expert is advising cotton textile mills on weaving, printing, and finishing of the products. In China, an expert is assigned to advise on the design of industrial products and on packaging and to help in the training of required personnel. India is provided with advice on the substitution of imported metals such as copper, zinc and tin by locally produced aluminum, steel, etc. Another expert on steel castings and plant operation is assigned to the Mysore Iron and Steel Works. A third expert is advising the Government of India on the development of her own boiler manufacturing industry. An expert on company standardization completed his assignment at the Indian Standards Institute and, in connexion with his training responsibilities, prepared a standardization primer which is considered useful not only for India but for other developing countries as well. The Indian Statistical Institute is being assisted by an expert in quality control who has devoted a major portion of his time to lecturing on courses in industrial engineering and in assisting the Institute in its

consulting programme to industrial establishments on problems related to industrial engineering. A team of experts has completed a series of studies on a selected number of mineral-based and forest-based industries for the States of Madhya Pradesh and Mysore, and the Government of India has requested the extension of this programme under the 1967-68 programme. In Iran, a group of experts have worked on the possibilities for marketing the country's chinaware and sanitary porcelain, on raising the standard of wool grading and testing, on the production of basic pharmaceutical products and the preparation of a comprehensive programme of compounding and packaging industries, on engineering, management and marketing problems of the Shiras Fertilizer factory, on possibilities for the development of electronics industries in the context of a regional development effort by Iran, Pakistan and Turkey, and on the expansion of metal-transforming industries. In the future, a substantial part of assistance required by Iran is to be provided through the Research Centre for Industrial and Trade Development which is being strengthened by a project under UNDP/SF. The Republic of Korea has been provided with an expert on electrical equipment standards who has helped the National Research Institute in installing furnace temperature controllers and in initiating the manufacture of semi-conductors, transistors and diodes. Another expert is attached to the Institute on foundry and metal casting. Malaysia is being assisted in the field of tanning. In the Philippines, a short-term consultant advised the Government on the design of an integrated steel industry in Iligan, Mindanao. The Economic Development Board in Singapore is aided by a metallurgist in the organization and initial operation of a metallurgy laboratory, and by another expert specialized in foundry techniques. In addition, Singapore was provided with experts in tanning, vegetable oils, chemicals, industrial design and light engineering industries, building hardware, electrical engineering and appliances. In Thailand, a short-term expert was assigned to consolidate the advisory requirements for a project in metal industries.

16. Israel was provided with an engineer on technical problems of packaging of products for supermarkets, an adviser on design, materials and finish of quality furniture, and a short-term mechanical engineer on planning and organization of maintenance in fertilizer and chemical plants.

17. In Bulgaria, an expert has completed a short-term assignment on the dyeing of synthetic fibres, and two additional experts, one in electronics and the other on plate glass production, have been appointed and are expected to take up the assignment early in 1967. Six short-term experts worked in Yugoslavia on the problems of production of semi-kilned steel, hot and cold rolling of stainless steel, on de-gasification of sheets in vacuum and on rolling of high-alloy tools, production of C-cores and finishing of textile fabrics.
18. A chemical engineer is helping Guinea in the development of industries, especially on extraction of oils and fats and production of fruit and vegetable juices and perfumes, within the framework of the seven-year plan. For Niger, two short-term experts studied the possibilities for the establishment of a textile industry and evaluated the previous studies made on this subject. An expert on hides and skins is helping Rwanda. In Tunisia, a mechanical and metallurgical engineer completed his assignment on a work plan for the factory at Menzel-Bourguiba, and another industrial engineer assisted in the techno-economic studies of a series of industrial projects of interest to the "Société Nationale Tunisienne d'Investissement". A short-term expert was sent to the United Arab Republic to advise the Organisation for Standardization on quality control and industrial standardization.
19. Argentina was provided with experts assigned mainly to the National Institute of Industrial Technology (INTI) in highly specialized fields of applied thermodynamics, combustion, food technology, laboratory operations, and X-Ray physics and spectographic analysis. Another expert has been helping a group of industries on time and motion studies. A chemical engineer completed a four-month assignment on the industrialization of sugar by-products, and another expert completed a seven-month survey of the possibilities for manufacturing pharmaceuticals. An expert sent to Peru for six months prepared a study on the possibility for establishing a fertilizer plant in the northern part of the country, and the project is now being considered for implementation by the Government. Three experts, under Funds-in-Trust, are working in Venezuela on industrial fermentation, textiles and mechanical industries.

B. Policies and Programming

20. About 28 per cent of the total number of experts was concerned with activities classified under the general title of Policies and Programmes, including services such as: formulation of industrial development programmes, advice on industrial policies, studies connected with the identification of possibilities for industrial promotion, preparation or evaluation of industrial projects, stimulation of industrial production in relation to possibilities for export, co-ordination and support of national services dealing with industrial studies and promotion.

21. In Afghanistan, under the OPEX programme, an expert has been working for the last five years, first as chief of the Industrial Management Institute and subsequently, as chief of the Planning Bureau in the Ministry of Mines and Industry. Cambodia is provided with an adviser on industrial planning and organization, who is working on an inventory of the country's natural resources and on a study of existing industrial production and evaluation of industrial projects. An expert, appointed early in 1965, surveyed Ceylon's industrial structure with a view to analysing and co-ordinating present and future development and production plans and helped in the preparation of a ten-year perspective and five-year detailed development programmes. Ceylon was also assisted by two experts in industrial evaluation and planning attached to the Department of National Planning, in order to assess the various projects and programmes in both private and public sectors. Iran is being assisted by a team of experts in the preparation of the industrial sector of the country's Fourth Five-Year Development Plan and the formulation or evaluation of industrial projects. A more comprehensive project is to follow for the strengthening of the Research Centre for Industrial and Trade Development, with the support of UNDP/SF. In Nepal, an industrial survey mission is being organized for which a team leader is already in the field. The Economic Development Board, established in Singapore on the advice of a United Nations industrial survey mission sent in 1961, continues to be assisted by two economists and a Deputy-Director, under the OPEX programme.

An expert assigned to Syria on project evaluation prepared the initial study for the production of cement pipes and poles. In Kuwait, an industrial expert financed by Funds-in-Trust is advising the Ministry of Finance and Industry on the evaluation of industrial projects as well as the formulation of



industrial policies. Assistance is provided to Iraq by an expert who is preparing the framework for an industrial development programme. In Jordan, a Centre for Industrial Development is being established, with the support of the UNDP/SF, to integrate and expand the assistance provided by ILO and the support requested under contingency from the United Nations for the preparation of industrial development programmes and the review and evaluation of feasibility studies. In Saudi Arabia, an expert under EPTA is attached to the Ministry of Commerce and Industry for the analysis and evaluation of industrial programmes and projects.

23. In Algeria, an industrial economist is attached to the "Direction Générale du Plan et des Etudes Economiques" and to the Ministry of Industry for study and evaluation of industrial projects. Cameroon has been assisted since 1964 by an industrial economist in the preparation of the industrial sector of the country's development plan. An industrial adviser is helping Dahomey in the development of industrial projects and on matters related to the organization of services for industry. An inter-regional adviser assisted Libya in defining the functions of an office to be attached to the Under-Secretary of State for planning, evaluation, co-ordination and follow-up of implementation of industrial development programmes. In Malawi, an OPEX appointee is serving as general manager of the Malawi Development Corporation which covers a wide range of industrial projects and large-scale agricultural schemes. The manager is guiding the corporation during its formative years. Before assuming his present duties, the expert served as a United Nations adviser to the Prime Minister on industrial programming and policies. In Mali, three industrial advisers are working on the study of resources for industrial development, the preparation of specific projects and their priorities. Two short-term missions were sent to Somalia to advise on assistance required for establishing an industrial development agency. These missions resulted in governmental requests for an industrial programmer and an industrial cost accountant. They will co-operate with the industrial engineer who has been advising the Government, since October 1965, under the Regular Programme, on the first Five-Year Plan and the development of projects in sugar manufacturing, meat packing, milk processing, cotton textiles, etc. At the request of the Governments of Botswana and Lesotho, a short-term expert was assigned to the two countries to carry out a broad economic survey of possibilities for establishing industries and industrial estates. In Liberia during the past four years, an industrial economist

has been preparing industrial feasibility studies, and his successor is expected to help the Government in respect of the institutional mechanism required for the implementation of industrial projects. The industrial planning adviser who had been attached to the Government of Tunisia since January 1965 completed his assignment in August 1966. Following a UN/ECA/FAO economic survey mission, an inter-regional adviser was sent to Zambia in 1964, and an industrial adviser has been assisting the Government since October 1965 on industrial planning and programming, the preparation of individual projects and the expansion of some of the existing industries.

24. An industrial consultant, supported by an associate expert, is advising the Ministry of Commerce and Industry in Cyprus on the preparation and evaluation of industrial projects and on the possibilities for promoting investment. The Government of Turkey has requested the services of a team of experts to assist in the establishment of an industrial project office in the Ministry of Industry. The main task of this office will be to prepare industrial projects, to obtain quotations for equipment and to prepare "bankable projects". The first three members of this group began their assignment in 1966.

25. In Argentina, an expert is attached to the National Council for Development (CONADE) to help formulate the chemical industries section of the Five-Year Development Plan. Industrial production for export is also the subject of another project approved for Argentina. In the Dominican Republic, an industrial adviser is attached to the "Corporación Fomento Industrial" on the preparation and evaluation of industrial projects. An industrial programmer is attached to the "Centro de Estudios Economicos y Sociales" (CENDES) of Ecuador. The report of a team of experts assigned to study the possibilities of Mexican industries entering the European market was submitted to the Government. This report was prepared with the participation of the "Nacional Financiera" and in co-operation with "Petroleos Mexicanos".

#### C. Industrial Institutions

26. Most of the experts classified in this category, comprising 13.7 per cent of the total, have been attached to the projects supported by UNDP/SF as described in Section II of this document. Here, mention is made only of some of the experts attached to national institutes or given specific research assignments.

27. An expert on industrial documentation is being furnished to the Iranian Research Centre for Industrial and Trade Development. In Malaysia, an expert has been provided to assist in establishing a National Institute for Scientific and Industrial Research. A pharmacologist sent to Israel in August 1965 is assisting the National Council for Research and Development to organize laboratory facilities and to select staff for undertaking pharmacological screening of newly synthesized organic chemicals. The Government has requested an extension of the expert's assignment.
28. In Libya, a chemist, under Funds-in-Trust, is helping the Ministry of Industry in the planning and organization of its applied chemical research programmes, including the training of new chemistry graduates in the field of applied research and laboratory techniques.

D. Small-Scale Industries

29. Assistance for this group of industries involved nearly 11 per cent of the experts. Included therein are projects dealing with general economic, institutional and technical problems related to the promotion of small and medium-scale industries, projects dealing with specific problems of individual small or medium-size industries, and projects related to the establishment of industrial estates.
30. An expert has been assisting Ceylon in improving the quality and production of the ceramic factory in Negombo and in establishing a second factory at Piliyandala. In China, a financial adviser is studying policies and measures to be adopted by the Government on small business promotion programmes, terms of small business loans, organization of a small business investment company, etc. A tool room expert and a tool and die maker are attached to the industrial estate established by the Government of India in Guindy, Madras. An expert is attached to the Office of the Development Commissioner of Small-Scale Industries of India to improve the lens-grinding technology and to start up new lines of manufacture. Another expert on electrical measuring instruments was assigned to assist India in the production of watt-hours meters, pH meters, amvolt, etc. and in updating the existing standard of design and manufacturing methods. In the Republic of Korea, the export of ceramic products is expected to benefit from the services of an expert on quality control. In Laos, an expert is working with the Ministry

of Economy, in continuation of a project started in 1962, on the promotion of small-scale industries with particular emphasis on the use of indigenous raw materials. In Western Samoa, two experts and an associate expert have helped in the improvement of furniture and cabinet-making industries and the introduction of modern designs.

31. An inter-regional adviser submitted a set of recommendations to the Government of Cameroon for the development of small-scale industries. In Mauritania, an industrial engineer has been assigned to advise on possibilities for industrial development in connexion with the second quadrennial plan of development. An industrial economist has been appointed for Nigeria, and will be assisted by an industrial engineer, to survey possibilities for the development of small-scale industries. A small-scale industry adviser is assisting Rwanda and has helped in the preparation of a project for the extraction of pyrethrum. Another expert in small-scale industry assigned to Senegal has made a proposal for the establishment of an industrial estate near Dakar.

32. In Chile, the two experts assigned in 1962 and 1963, are continuing their services to various small industrial enterprises. Jamaica was provided with an expert on industrial estates, another expert on garment industry, and a third on footwear.

#### E. Management and Training

33. During the year, 4.2 per cent of the total number of experts was assigned under this category. However, a noticeable increase was achieved in this area of assistance as the number of trainees who were awarded fellowships in the field of industry increased to nearly 300 in 1966 (see para. 4).<sup>5/</sup>

34. In Burma, an expert is working with the Institute for Training in audit and accounts to train the staff of nationalized enterprises. In China, a short-term consultant was assigned to undertake a diagnostic survey for improving the standards of industrial management and organization. An industrial engineer and an industrial designer are advising the Management and Advisory Services of the Majlis Amanah Ra'ayat in Malaysia. In Iraq, an expert appointed in 1964 continued his work on stores-management.

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<sup>5/</sup> For further information on fellowships see the Report on Activities and Programme of Work of UNIDO (document ID/B/4).

35. A team of four experts have been appointed for Ghana, under OPEX programme, to act as directors of industrial production, financial planning and control, industrial management, and planning and marketing development for the State Enterprises secretariat.

II. PROJECTS UNDERTAKEN BY UNDP/SPECIAL FUND FOR WHICH  
CID HAS SUBSTANTIVE RESPONSIBILITY

36. The number of projects in the field of industry supported by UNDP/Special Fund for which United Nations (CID) is the leading agency has more than doubled since the end of 1964. While there was a total of nine projects at that time, including one project in Bolivia which was subsequently cancelled in 1965 at the request of the Government, the number of projects increased to eighteen by the end of June 1966. Three new projects were recommended by the Consultative Board for approval of the Governing Council at its meeting in January 1967. During this period the total UNDP/Special Fund allocation to these projects increased from approximately \$8.9 million at the end of 1964 to \$17.8 million by June 1966. These allocations were matched by Governments' contributions in kind of approximately \$18 million by the end of 1964, and \$26.1 million for the eighteen projects which were approved by the end of June 1966.

37. For the period end 1964 to end June 1966, there was an increase of 100 per cent in the number of projects, with corresponding increases of 100 per cent in UNDP/Special Fund allocations and 45 per cent in Governments' contribution kind. Table 6 below, which shows the projects grouped according to their respective functional category, indicates the financial details for each project.

Table 6

INDUSTRIAL PROJECTS UNDERTAKEN BY UNDP/SPECIAL FUND WITH THE UNITED NATIONS AS EXECUTING AGENCY AND FOR WHICH CID HAS SUBSTANTIVE RESPONSIBILITY (AS OF 30 NOVEMBER 1966)

Project Title and Country	Date Approved	Duration	Total Special Fund Allocation (US dollars)	Governments' Contribution in kind (US dollars)	UN Expenditures Cumulative to 30 November 1966 (US dollars)
<b>A. <u>Research institutes</u></b>					
BOLIVIA Technological Research Institute (cancelled in 1965)	Jan 1963	5	1,275,700	155,000	19,890
COLOMBIA Institute for Technological Research	Dec 1960	4	601,500	513,000	466,645
ISRAEL Industrial Research Centre	Jan 1964	5	1,267,100	8,135,088	2,576
ISRAEL Silicate Institute	May 1961	3	538,866	146,300	552,157
PARAGUAY Technical Standards National Institute	May 1962	5	679,815	193,705	89,126
SUDAN Industrial Research Institute	June 1963	5	748,900	1,404,939	177,560
THAILAND Technological Research Institute	Jan 1964	5	846,300	3,083,930	351,431

Table 6 (continued)

Project Title and Country	Date Approved	Duration	Total Special Fund Allocation	Governments' Contribution in kind	UN Expenditures Cumulative to 30 November 1966
<b>B. <u>Small-scale industries and industrial estates</u></b>					
IRAN Establishment of an Industrial Estate	June 1963	5	637,500	3,112,100	139,437
UGANDA Small Industries Develop- ment Programme and Establishment of an Industrial Estate	Jan 1966	5	746,400	1,129,000	9,392
<b>C. <u>Development of specific industries</u></b>					
ALGERIA Industrial and Marketing Surveys on Petroleum Derivatives and Natural Gas	Jan 1965	2	904,500	326,531	106,371
PAKISTAN Pre-Investment Studies for the Promotion of the Fertilizer and Petro- chemical Industries	June 1965	3	1,580,800	950,651	23,093
RWANDA Pilot Plant for Industrial- ization and Pyrethrum Production, Makingo	Jan 1966	3	1,459,500	400,000	30,000
UNITED ARAB REPUBLIC Engineering and Industrial Design Development Centre	Jan 1967	5	928,200	1,224,000	-



Table 6 (continued)

Project Title and Country	Date Approved	Duration	Total Special Fund Allocation (US dollars)	Governments' Contribution in kind (US dollars)	UN Expenditures Cumulative to 30 November 1966 (US dollars)
<b>D. <u>Industrial development centres</u></b>					
IRAN Research Centre for Industrial and Trade Development	Jan 1967	-	954,000	1,560,000	-
JORDAN Centre for Industrial Development	Jan 1967	4	1,038,800	532,000	-
SAUDI ARABIA Industrial Studies and Development Centre, Riyadh	June 1965	3	624,800	2,000,000	42,673
TANZANIA Industrial Studies and Development Centre	Jan 1965	3	525,800	169,734	68,713
TUNISIA National Centre for Industrial Studies	June 1966	5	771,700	1,025,000	-

Table 6 (continued)

Project Title and Country	Date Approved	Duration	Total Special Fund Allocation (US dollars)	Governments' Contribution in kind (US dollars)	UN Expenditures Cumulative to 30 November 1966 (US dollars)
<u>E. Regional projects</u>					
ICAITI (PHASE I) Central American Research Institute for Industry	May 1959	5	2,258,000	1,300,000	2,258,623
ICAITI (PHASE II) Central American Research Institute for Industry	June 1965	3	832,500	1,414,100	268,303
MAGHREB Centre of Industrial Studies for the Maghreb (Algeria, Libya, Morocco, Tunisia)	Jan 1966	5	1,454,900	645,000	-
<b>TOTAL</b>			<b>20,675,581</b>	<b>29,420,078</b>	<b>4,945,710</b>

38. The rate of implementation of these Special Fund projects has gradually increased, as can be concluded from the following yearly expenditures:

	(US dollars)
1963 . . . . .	404,700
1964 (This increase was due in part to the inclusion in the 1964 figures of amounts expended for the three previous years for the Central American Research Institute for Industry (ICAITI) Phase I.)	1,400,000
1965 . . . . .	588,400
1966 (January-November) . . . . .	866,000

39. The increase in the amount of assistance to projects in the field of industry has been accompanied by an increase in the number of international experts sent to the field. There were ten experts servicing these projects in 1963, thirteen in 1964, twenty-eight in 1965 and forty-four by the end of December 1966.

40. The range of activities supported by the Special Fund in the field of industry has expanded. Prior to the end of 1964, all projects benefiting from such assistance, with the exception of the Industrial Estate project in Iran which was established in June 1963, were concerned with technological research in industry. However, while these basic research activities were expanded further in 1965/66, emphasis has been laid also on the study of techno-economic factors leading to the identification of possibilities for new industries or the expansion of existing ones. In some cases new projects have been formulated with a view to the use of a specific resource or the creation or expansion of a specific industry. Attempts made at encouragement of regional co-operation resulted in the approval of a new regional project covering the four countries of North Africa, namely, Algeria, Libya, Morocco and Tunisia.

A. Research Institutes

COLOMBIA: Institute for Technological Research

41. The purpose of this project is to expand the facilities of the Institute for Technological Research at Bogotá, in order to enable it to give more effective assistance to the country's small and medium-sized industries. The services

provided to industries such as food, processing of agricultural products, metallurgical, mechanical and chemical industries include assistance in developing operating techniques for improved utilization of raw materials and equipment, as well as the provision of technical advice through consultation, seminars and publications. Other objectives of the Institute are to provide assistance to private and public agencies in order to attain higher productivity through the establishment of quality control systems, the undertaking of technical and market feasibility studies of new products, and the training of technical personnel required to maintain the level of research being developed at the Institute after the Special Fund project has been concluded.

42. It is anticipated that the project, which has been in operation since July 1961, will be completed in June 1967. So far in its operation the Institute has achieved the following: conducted eighteen techno-economic studies on opportunities for the manufacture of new products, representing a total investment of more than one billion pesos; made investigations on the industrial utilization or upgrading of agricultural products; conducted fourteen technical investigations on subjects of national importance; made twenty studies in agricultural chemistry; completed sixty projects on the evaluation of quality of important groups of food, agricultural and industrial products; participated in 450 consultations and 1,260 technical visits to small and medium industries; processed 9,100 analyses of samples at the request of private companies and government agencies, and processed 1,422 analyses of soils, pesticides and fertilizers.

43. Several international experts attached to the project are active in the fields of metallurgical analysis, tool engineering, industrial estates and organization of a research centre in the plastics industry. Other experts on the food industry will be recruited as soon as the Institute's new building is completed.

44. A consultant in research administration was attached to the Institute for four months in 1966, to review its operations against the general background of industry and economics in Colombia. As a result of this review, in conjunction with the findings of an earlier UNDP/CID mission to Colombia, plans are now in progress to extend this project into a second phase.

ISRAEL: Industrial Research Centre

45. In March 1966, a plan of operation was signed for a project to assist the Government in establishing and initially operating an Industrial Research Centre which will promote the application of the findings of pure research to production as a means of accelerating industrial development. The Centre will concentrate on medium- and long-range assistance to industry by consultation and the dissemination of scientific and technological information and technical and economic analysis of new and promising technological products and processes. The Centre will function as an autonomous entity under the aegis of the National Council for Research and Development.

46. The work of the Centre will be devoted, initially, to those areas such as food technology, plastics, textiles and fibres, and some aspects of inorganic and organic chemistry which are of primary significance to potential export industries. The project will focus on developing the individual laboratories necessary to achieve this purpose and on creating a solid central base on which the Centre can grow to fulfil the aim for which it was established. An in-service training programme, comprising both short- and long-term study, will be organized at the Centre to develop scientific manpower.

PARAGUAY: Technical Standards National Institute

47. In October 1963, a plan of operation was signed for a five-year project to advise and assist the Government of Paraguay in the establishment and initial operation of a Technological and Standards Institute in Asunción, Paraguay. The objective of the Institute is to prepare standards of quality and methods of quality control, with particular reference to major export products, meat, timber, vegetable and essential oils, hides, skins and cotton, which together account for over 70 per cent of exports.

48. Initially, the Institute laid down the minimum requirements for products, but its work has been progressively expanded with a view to its functioning as a national bureau of standards. It is organized around four laboratories specializing in testing of construction materials, especially wood, food-stuffs, with emphasis on bacteriology, vegetable and essential oils, and fibres, textiles, hides and leather.

SUDAN: Industrial Research Institute

49. This project was initiated to assist the Government in establishing the Institute to aid industrial development through the application of industrial research and technology, and its adaptation to the country's conditions and resources, as well as to create a local source of practical information, assistance, professional advice and counsel on processes, standards and efficient techniques of industrial production, casting, organization and management technology. The Institute also encourages the training of Sudanese technical personnel essential to the accelerated economic development of the country.
50. The project became operational in April 1965, with its anticipated completion date being June 1969. Through mutual agreement between the Government of the Sudan and the United Nations, the work programme of the Institute has been rephased to curtail major technological research operations and to emphasize professional services rendered by the management engineering division of the project, which comprises the industrial management specialist, the production engineer and the industrial cost accountant. A detailed survey of the Khartoum Tannery was prepared and transmitted to the Government. This survey covered production, planning and control, management, budgetary and costing control, financial projection and sales planning and production, and has resulted in a request for implementation of a complete process cost accounting system. In addition, similar preliminary reports have been prepared for the forestry department, as well as for other public and private enterprises.
51. The Institute has also co-operated with the Faculties of Science, Engineering and Agriculture of the University of Khartoum in the use of facilities and equipment, so as to avoid unnecessary duplication of expensive equipment. The Institute is also co-operating with the Management Development and Productivity Centre, another Special Fund project under execution of the ILO, with the Institute of Public Administration on some of its major studies, with the hides, skins and leather development and training project, as well as with the Industrial Development Bank and the United States AID programme in Sudan.

THAILAND: Technological Research Institute

52. The Government of Thailand has established the Applied Scientific Research Corporation of Thailand as its principal research agency. The Research Corporation is expected, ultimately, to include several specialized research organizations, including institutes for industrial technology as well as agricultural and medical research. The purpose of this five-year project is to assist the Government in the development of the Research Corporation and in the establishment and initial operation of the Technological Research Institute as the first of its specialized research organizations.

53. As of May 1966, about twenty research programmes had been outlined, falling into the categories of solving problems of existing industries, adjusting known technology to local conditions and industrial feasibility studies. Most of the active programmes have been in the nature of on-the-job training exercises.

54. The work of the Institute can be roughly divided into four groups which are concerned with industrial chemistry, minerals and metals, materials of construction and fibres and textiles, respectively. The industrial chemistry group, which has directed its efforts primarily towards the utilization of agricultural and other plant products, has outlined programmes for work on natural perfume and flavour materials, industrial uses of tamarind, rice bran, oil extraction, iodization of crude salt, citric acid by industrial fermentation, antibiotics in food preservation, solar energy and industrial effluent control.

B. Small-Scale Industries and Industrial Estates

IRAN: The Establishment of an Industrial Estate

55. The purpose of the project is to encourage and facilitate the development of small and medium-scale industry in Iran by assisting the Government in establishing an Industrial Estate Authority and by providing for the planning, construction and operation of a demonstration estate at Ahwas, Iran. The first phase, involving feasibility studies, determination of site and preliminary layout and cost estimates, has been carried out. The project is now at the stage where the building plans for the estate have been completed and requisitions for equipment for the common services facilities, workshops and laboratories are being processed.

UGANDA: Small Industry Development Programme and Establishment of an Industrial Estate

56. This project is initiated to assist the Industrial Division of the Ministry of Industry and Commerce in establishing facilities for the servicing and development of small industries, and in planning a demonstration industrial estate. The project was approved in January 1966 and a project manager was recruited in August 1966 but the Government of Uganda has since requested a revision in the description, purpose and organization of the approved project. A mission which was sent to the country in September/October 1966 reached an agreement with the Government on the amendments to the original project.

C. Development of Specific Industries

ALGERIA: Industrial and Marketing Surveys on Petroleum Derivatives and Natural Gas

57. The purpose of this Special Fund project is to assist the Government in carrying out feasibility studies aimed at local utilization of petroleum derivatives and natural gas as well as the export of natural gas, in order to ensure the fullest development of its agricultural, mineral and industrial resources within the framework of a national plan for the economic development of the country.

58. The initial phase of the project consisted in collecting, compiling and interpreting basic statistical and economic data on the Algerian economy. The documentation prepared in this phase is relevant both in regard to problems connected with the export of gas and the creation of a petrochemical industry, and consists of publications on inventory of natural resources, inventory of industrial installations, Algerian demographic structure and perspectives, present structure and past growth for the Algerian economy, balance of payments in Algeria in 1970, market studies for petrochemicals, availability of water in prospective industrial areas and cost of industrial power.

59. An interregional adviser from CID assisted the mission as a short-term consultant on fertilizers in January 1966 and sub-contracts have been awarded to two concerns for studies on natural gas export and marketing and feasibility studies on local industrialization based on petroleum, natural gas and also on plastics, terpenents, rubber and fertilizers.



PAKISTAN: Pre-Investment Studies for the Promotion of the Fertilizer and Petrochemical Industries

60. This project was established to assist Pakistan in the development of its fertilizer and petrochemical industries and to promote the use of fertilizer and petrochemical end-products, as provided by the Third Five-Year Plan (1965-1970). Feasibility studies will be carried out for select fertilizer and petrochemical production covering the economic, technical and commercial aspects of planned production, in particular, the determination of the type of plant and kind and quantity of commodities to be produced, plant location, raw materials needed and marketing system to be chosen. The project will also cover financial studies, including capital requirements, means and plans of financing, production and distribution costs, selling prices and profit forecasts, as well as an analysis of the impact of the development of the fertilizer and petrochemical industries on the national economy.

61. The project, which was approved by the Governing Council of the Special Fund in June 1965, for three years, has not yet become operational. However, the project manager was recruited in February 1966 to carry out the pre-implementation stage, which includes the completion and negotiation of the plan of operations which is now in its final stages.

62. FAO, through a sub-contract, is co-operating with the CID on the project in the area of the promotion and use of fertilizers.

RWANDA: Pilot Plant for Industrialization and Pyrethrum Production, Mukingo

63. The purpose of this project is to assist the Government in the establishment and initial operation of a pilot plant for pyrethrum production, with a capacity of 200 tons of extract per annum. In conjunction with the proposed processing operations, the Government is undertaking and will intensify a programme of agricultural development, designed to set up the production of dried pyrethrum flowers.

64. The UNDP/Special Fund will provide equipment for the pilot plant, including modern machinery required for the drying, grinding and complete solvent extraction of the flowers and for the refining and processing of the product. It will assist in the erection and operation of the plant for a period of three years, through

the provision of eighteen man-years of expert and consultant services in the fields of chemical engineering, manufacturing, mechanics, refrigeration, marketing and industrial economics and six man-years of fellowships for the training of the counterpart staff. Funds for a sub-contract to undertake a specific agricultural development study in order to promote the productivity of small growers are included.

65. In preparation for its operational state, a market survey was made by a consultant appointed early in 1966. Various specialized firms have been invited to submit data concerning costs of installations as well as plant size. The European Economic Community has taken steps to assist in the expansion of the production of pyrethrum since October 1966. Further implementation steps are being considered.

UNITED ARAB REPUBLIC: Engineering and Industrial Design Development Centre

66. The establishment of the Engineering and Industrial Design Development Centre with United Nations support during its first five years will facilitate the further industrial development of the United Arab Republic and help to improve its difficult foreign exchange situation. The project was approved by the Governing Council in January 1967.

D. Industrial Development Centres

IRAN: Research Centre for Industrial and Trade Development

67. The purpose of the project, the duration of which is five years, is to strengthen the Research Centre for Industrial and Trade Development established by the Ministry of Economy in 1964 and enhance its ability to formulate industrial, mining and trade policies and programmes, and to prepare and evaluate projects of high priority in these fields. This project was approved by the Governing Council of UNDP in January 1967.

JORDAN: Centre for Industrial Development

68. The Centre will have the functions of advising and assisting in the preparation of a programme of industrial development, keeping under review the state of industrial priorities, advising the Government on its industrial policies,

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conducting feasibility studies, providing management training and advisory services, establishing and improving standards and quality control of products, and developing industrial estates as well as taking other measures which will aid the development of the industrial sector. This project was approved by the Governing Council in January 1967.

**SAUDI ARABIA: Industrial Studies and Development Centre**

69. The Centre's functions are to advise the Government agencies concerned on matters of industrial development and on the co-ordination of their activities, and to carry out or commission industrial feasibility studies, project evaluation and implementation. It will co-operate with the Central Planning Organization on all matters relative to policies and programmes of industrialization, as well as industrial financing, and assist in the planning and establishment of industrial estates and their management and operation. The project also provides for the establishment and initial operation of a model industrial estate to be located at Jeddah, in which a branch office of the Centre will be established and which will serve as a nucleus for future extension services to industry. The Centre will also co-ordinate industrialization activities under bilateral, multilateral and international programmes. The project which was approved for three years has an anticipated completion date of February 1969.

**TANZANIA: Industrial Studies and Development Centre**

70. The objective of the project is to assist the Government in the establishment of the Centre to advise the Ministry of Industry, Mineral Resources and Power on matters relating to industrial development, as well as to serve in a consultative capacity to authorities responsible for economic planning and financing on all matters affecting the industrial development of the country.

71. The Centre has carried out work on a large number of projects at the request of the Government, and development and financing institutions as well as private investors. Advice has been given on the location of industries, industrial census and statistics, the standardization of tariffs on raw materials and products affecting certain industries, incentives for some industries, embargo on certain products, as well as policy for developing the handicraft industry. Advice has

also been given concerning the organization of the Industrial Division of the Ministry of Industries, Mineral Resources and Power (Impower) the organization for carrying out the statutory duties according to the electricity ordinance, and the organization of industrial estate. The Centre has also assisted the Government with investigations and advice in connexion with the negotiations concerning the East African Common Market. Work has also been carried out on various projects which involve the utilization of natural resources such as the cashew nut processing project which has been given top priority by the Government. The country has an annual harvest of some 65,000 tons of cashew nuts which, if processed locally for export, would realize an additional \$US10 million annually. Plans have also been worked out for two medium-scale fruit canning industries (tomato puree and jam); the production of full fat soya flour is being investigated as well as potato dehydration and starch production from cassava and also a scheme for making canned milk. Work has also been done on vegetable oils. An investigation of three rayon weaving factories has been conducted in association with the National Institute for Productivity, the Special Fund project under the sponsorship of the ILO. Additional work has been done in the textile and fibre industries, the leather, rubber and plastics industries, wood and paper industries, chemical industries, metallic mineral industries, basic metal industries, metal processing industries, and electrical industries.

TUNISIA: National Centre for Industrial Studies

72. The purpose of this project is to assist the Government of Tunisia in the establishment and initial operation of the National Centre of Industrial Studies and thereby facilitate the planning and implementation of the country's industrial development programme. It will also strengthen the national institutions concerned with the study and promotion of industrial development in the four countries of the Maghreb as well as provide better support for the regional centre for the Maghreb as outlined in paragraphs 82 and 83.

E. Regional Projects

ICAITI (Phase I): Central American Research Institute for Industry

73. This project was established under the Agreement of 1955 between the Governments of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, with the objective of assisting the growth and implementation of the Central American Economic Integration Programme by helping its member Governments, as well as the private and public sectors of industry, in solving problems in the field of technical research and technical services. This project was completed in June 1965 but was followed by a "second phase" project approved during the same month.

74. There was a steady growth in the industrial activities of ICAITI over the period of its operation. At first, the services rendered by the Industrial Economics Division were concerned mainly with market studies for private investors. The requirements of the Economic Integration Programme led to the undertaking of basic techno-economic studies aimed at obtaining a clear picture of the existing situation of each industrial sector and its technological development. Studies of this nature were carried out on food-stuffs, construction materials, fats and oils, leather and its by-products, pharmaceuticals, chemicals and fertilizers. These studies have been used by regional institutions such as the Permanent Secretariat of the General Treaty of Economic Integration (SIECA), the Central American Bank for Economic Integration, the Joint Planning Mission for Central America, and also potential investors.

75. Later on, ICAITI's Engineering and Industrial Services Division was established to help new and expanding industries solve their problems of machinery and equipment acquisition, plant lay-outs, manufacturing processes, production problems, quality control and other services. Its Technological Research Division was set up to carry out technological consultations as well as laboratory tests and analyses, while the Geology and Mining Division carried out investigations of the area's mineral resources. Its Division of Standards, apart from formation of its library of world standards, which today includes 45 per cent of the world's standards organizations, prepared and submitted standards to pertinent regional organizations, national institutions and interested industrialists, as well as publishing them in their final and definite forms.

76. Systematic research, aimed at finding industrial uses for the waste products which result from the distillation of essential oils, was carried out on citronella and lemon-grass wastes. Research was also conducted on the uses of coffee wastes to find a number of industrial uses for them. By means of a process patented by ICAITI for diversifying the products obtained from corn flour, studies have been made of the possibilities of developing other products of popular local consumption. Some special hand instruments were designed for shelling the cashew nut, making unnecessary the cooking and burning method and avoiding destroying or altering the liquid content in the shell. Research was also conducted on carbonated coffee beverages, new methods of sulphur extraction, extraction of fresh coconut oil, coffee packaging and pulp and paper waste.

77. A study was done for the Central American Joint Planning Mission on the conditions and economic role of the leather and shoe industry and another study for the same body was completed on the construction materials industry. Studies of the Central American food industry and long vegetable fibres were conducted for the Central American Bank for Economic Integration and a study on the Central American pharmaceutical industry was made for SIECA.

78. A study of the market for caustic soda and its by-product chlorine, for the production of chlorinated insecticides such as DDT and BHC, as well as a study of the possible capacity of the necessary electrolytic plant were carried out by the Institute. These studies may lead to the production of caustic soda, which is consumed by innumerable industries in Central America, as well as the use of chlorine, its sub-product resulting from electrolysis, in the manufacture of pesticides, which are in great demand for fumigating cotton and other crops, as well as in combating malaria.

ICAITI (Phase II): Central American Research Institute for Industry

79. The second phase of assistance to ICAITI covers the three-year period June 1965 to June 1968. The economic integration agencies and organizations are now consulting the Institute on a more frequent basis than in the first phase of the project. The Institute has been asked to collaborate with SIECA, CEPAL and the Central American Joint Planning Mission in techno-economic studies aimed at

identifying industries of region-wide interest which might be installed in Honduras in order to equalize the nation's industrialization with development in the other four countries. The Institute obtained technical assistance, valued at \$US50,000, from the Inter-American Development Bank (IDB) for the purpose of furthering the required studies. The textile industry in the region has recommended that ICAITI be recognized as the control and mediation centre for industry disputes involving qualities of raw materials and products.

80. The Institute has completed its installation of a cobalt 60 unit for performing experiments in the gamma irradiation of tropical fruits and vegetables and has also installed freeze-drying equipment. The Electro-mechanics Section of the Institute which has recently been established, will provide services for the evaluation of projects such as plant expansion, industrial processes, product quality and industrial installations. Studies have been completed on the up-dating of market data for the tire industry and the food industry, and a study on the industrialization of blackstrap molasses is in progress. Many other studies for public and private bodies have been completed and many others are in progress.

81. At the ninth meeting of the Central American Economic Co-operation Committee in January 1966, it was recommended that ICAITI be recognized as the sole authority for the establishment of regional quality standards. To date, the Institute has published 47 standards, submitted 206 more to regional authorities for study, and has 180 in preparation, making a total of 433 ICAITI quality standards. The project has initiated a training programme in scientific and technological research techniques aimed at training young Central American professionals in specified techniques by means of practical work in fields of interest for the region.

MAGHREB (Algeria, Libya, Morocco, Tunisia): Centre of Industrial Studies for the Maghreb

82. The main objective of the project is to assist in co-ordinating industrial development of the four countries of North Africa, Algeria, Libya, Morocco and Tunisia, to obtain maximum utilization of natural resources as well as technical and investment capital. To achieve this objective, the project will provide necessary assistance for the establishment and operation of a Centre of Industrial Studies for the Maghreb, and thus help the participating countries to determine the specific fields and the nature and extent of their industrial co-operation.

83. At the request of the participating Governments, the Centre will undertake general industrialization surveys and specific feasibility studies, including market and location surveys, as well as studies on the integration of industries and of comparative cost of local manufacture and imports, with priority being given to studies affecting two or more countries. It will also co-ordinate its activities in the field of industrial development with other programmes undertaken in the Maghreb region under bilateral and multilateral technical assistance as well as with those of ECA and establish close co-ordination with national industrial development agencies already existing or to be established. A three man mission visited the four countries during October-December 1966 as a first step towards the implementation of the project and also to ascertain whether there is any specific subject on which assistance may be required before the project becomes operational.

F. Co-operation with Other Agencies

84. Promotion of joint projects with the specialized agencies has been encouraged as a means of maximizing the use of UNDP resources and at the same time reducing the charges to developing countries for counterpart services. This effort, however, is still in the experimental stage since such activity requires an extensive exchange of views with the agencies concerned and has to fit in with the requirements and organizational pattern of the requesting country. Examples of such co-operation are as follows:

INDIA: National Institute of Foundry and Forge Technology at Banahi, Bihar (UNESCO)

85. An exchange of views between UNIDO and UNESCO has taken place with regard to co-operation in this project through joint participation in a consultation and evaluation body which would extend throughout the duration of the project.

JORDAN: Centre for Industrial Development

86. As indicated in paragraphs 22 and 68, a Centre for Industrial Development in Jordan will be established in January 1967, with UNIDO as executing agency. The ILO will be closely associated with the Centre's work in the field of management training and advisory services to industry.

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KOREA (REPUBLIC OF): Extension Services Department in the Medium Industry Bank (ILO)

87. The main objective of this project is to assist the Medium Industry Bank to discharge its functions as a development institution more effectively. UNIDO can provide technical support for this project, and discussions are currently in progress with the ILO to determine areas of co-operation.

MEXICO: Resources Surveys of the State of Oaxaca (FAO)

88. UNIDO is co-operating with FAO on the above project by providing an industrial development expert. The job description for this expert, as well as his recruitment, will be the responsibility of UNIDO, in conjunction with the Resources and Transport Division of the Department of Economic and Social Affairs of the United Nations.

PAKISTAN: Pre-Investment Studies for the Promotion of the Fertilizer and Petrochemical Industries

89. UNIDO, the executing agency for this project, is receiving the co-operation of FAO, through a sub-contract to this agency for the promotion and use of fertilizers.

SYRIA: Industrial Testing and Research Centre (UNESCO)

90. At the invitation of UNESCO, UNIDO indicated its willingness to co-operate in the implementation of this project. Discussions are being conducted at the present time to determine the extent and manner of participation.

UGANDA: Small Industries Development Programme and Establishment of an Industrial Estate

91. The project for the development of small industry and the establishment of an industrial estate which is outlined in paragraphs 22 and 23, will be developed in close co-operation with the Management Training and Advisory Centre which is assisted by UNDP and the ILO as executing agency.

92. The United Nations Industrial Development Organization also co-operates with other United Nations agencies in the exchange of information, reports, studies, etc., as well as in the sending of joint preparatory missions to developing countries for the investigation and formulation of requests to UNDP in the technical co-operation field.

## III. SPECIAL INDUSTRIAL SERVICES PROGRAMME

93. At the thirty-second session of the Economic and Social Council held in July 1965, the Council requested the Secretary General "to make suitable organizational arrangements with a view to endowing the Centre for Industrial Development with the necessary operational flexibility and autonomy consistent with the nature and requirements of a broadly-based programme of action to accelerate the industrialization of developing countries".<sup>6/</sup> The Council, in its report, also asked the Secretary-General to give consideration to the question of providing additional financing on a voluntary basis and the way in which it might be utilized within the framework of the United Nations Development Programme.<sup>7/</sup> In response to this request, the Secretary-General, in his report to the twentieth session of the General Assembly, proposed the establishment of a "Special Industrial Services Programme", particularly with the objective of providing "a broader range of technical assistance services, under procedures more adapted to the particular requirements of industrial projects".<sup>8/</sup> Accordingly, the Special Industrial Services Programme was launched in March 1966, as a part of the over-all technical assistance programme of the United Nations, to be programmed and administered by the Centre for Industrial Development, in co-operation with the United Nations Development Programme.

94. The Administrator and the Commissioner for Industrial Development have established arrangements for joint review and approval of projects to be financed from the trust fund, on the basis of requests for assistance received, either by the Centre for Industrial Development or UNDP, from governments. The Centre for Industrial Development (now UNIDO) has taken the responsibility for execution of the projects thus approved.

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<sup>6/</sup> Economic and Social Council resolution 1081 F (XXXIX).

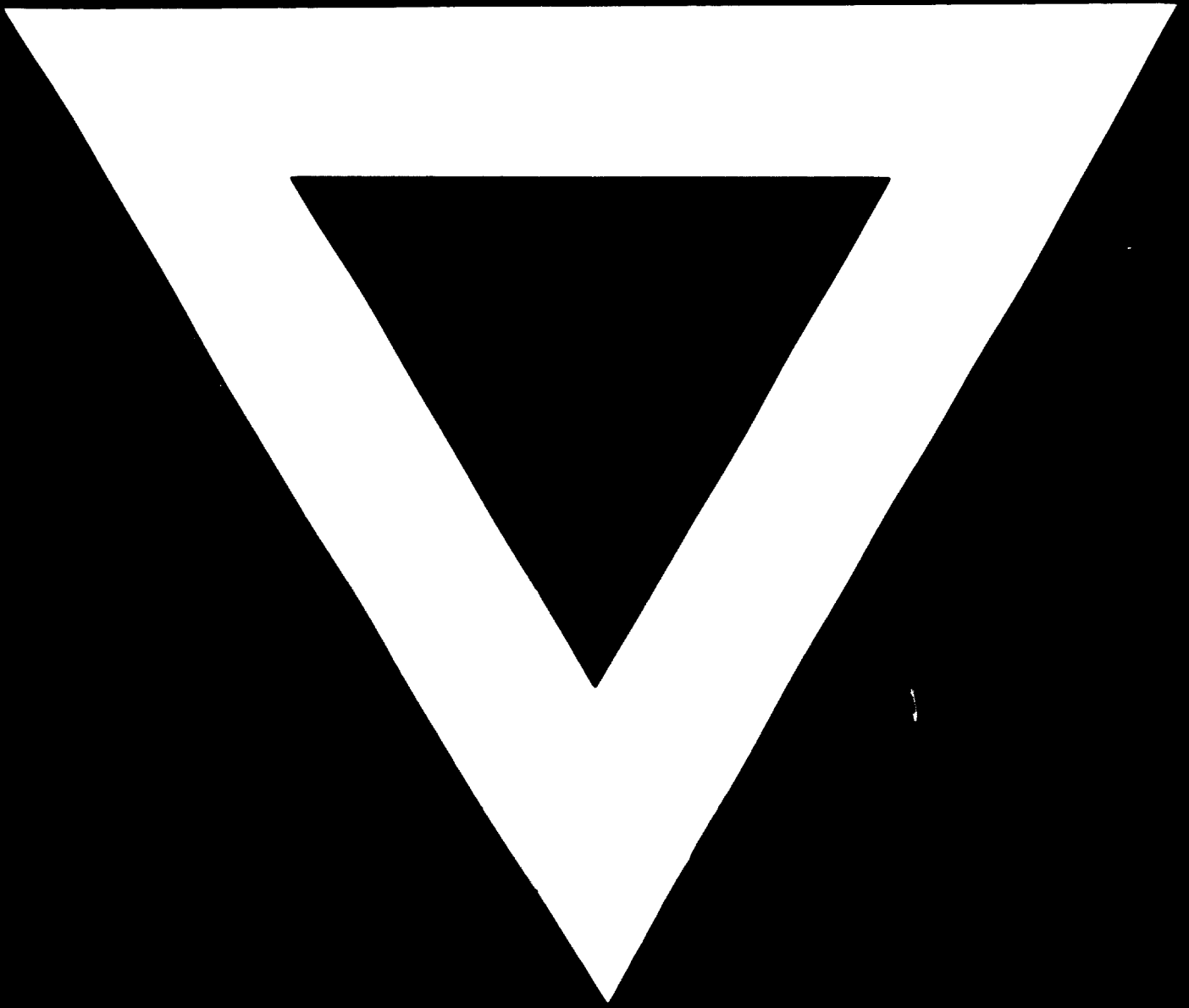
<sup>7/</sup> Official Records of the General Assembly, twentieth session, Supp. No. 3 (A/C.3) paras. 146-147.

<sup>8/</sup> Official Records of the General Assembly, twenty-first session, Supp. No. 1 (A/C.3) p. 103.

95. A summary statement of the status of projects approved as at 30 November 1966 was given for the information of the UNDP Governing Council (document DP/L.29). A comprehensive report on the development of the operations under the Programme of Special Industrial Services is being submitted to the Board under item 7 of its agenda (document ID/B/7).

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**11. 3. 74**